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1. Some Features in the Intimate Structure of the Human Cerebral Cortex. JOHN TURNER.
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5. Treatment of Phthisis in Asylums by Urea and its Salts. J. L. BUSKIN.
6. The Alkalinity of the Blood in Mental Disease. ROBERT PUGH.
7. The Abnormalities of the Palate as Stigmata of Degeneracy. E. H. HARRISSON.
8. Insanity from Hasheesh. JOHN WARNOCK.

1. *Structure of the Human Cortex.*—These new features described by Dr. Turner are (1) A beaded net-work which involves pyramidal cells of the cortex cerebri and which have not, hitherto, been observed in the human brain, but only around the nerve cells of some of the lower animals (guinea pigs and rabbits) when subjected to the influence of methylene blue injected into the tissues during life; and (2) an intercellular plexus of extremely fine fibrils which has, he believes, never before been actually demonstrated in any brain, human or otherwise.

The technic employed by the author is a modified methylene blue method, as described in the autumn number of Brain, 1900. The pericellular network which he has first described for human brain consists in man of fine dark fibrils, on which, at varying distances, are small dark beads, or sometimes rings, which, as a rule, are the nodal points of the meshes. The size of the mesh and the coarseness of its fibrils also differ, so that sometimes one meets with a big-meshed net, having relatively few beads and with very delicate fibrils, at others the beads are larger, very closely clustered together or even partially coalescing and the fibrils much coarser. So far as he has yet been able to determine, this network is met with only within the cells of the pyramidal type. It could be seen over these in all the layers where they are met with except the skin layer and probably the innermost or lower of the spindle-cells. This network he believes to be of nerve structure, as it is found along the dendrites, and this is evidence, he believes, that these parts themselves are concerned in the conduction of nervous impulses. On the question of thorns the author believed these to be artefacts. The paper is well illustrated and is one of much suggestive interest, particularly as the author takes up a number of related physiological questions.

2. *Insanity in Imbeciles.*—Insanity is rarely met with in the more pronounced grades of amentia. In the middle grades of imbecility, however, such a complication is far from being infrequent, and out of over 200 imbeciles whom the author has examined in the asylums of the London County Council, more than one-half at one time or another had been insane. The subject has not been discussed at all in England, and it deserves more attention. It is found, he thinks, that those imbeciles who subsequently became insane have for some years before the actual outbreak been prone to sudden fits or irritability, bad temper, moroseness or sulkiness often accompanied by acts of violence; or that they have been in the habit of wandering away from home, or that they have evinced a restless disposition. This mental instability appears to the author to be by far the most important factor in the causation of insanity in these patients. Uncontrollable ideation, with resultant delusions, uncontrolled emotional action are two very characteristic features in these imbeciles. They have emotional storms which are very common.

As for clinical types of insanity, the author says these are mania or melancholia, mania being the most common form occurring in about 55 per cent of all cases: melancholia (probably the older definition of melancholia here being meant) in 40 to 45 per cent. Delusional insanity is very rare and general paresis occurred in only two or three per cent.

3. *The Training of Nurses.*—This is a short paper on the general topic of administration that contains very little that can be abstracted. The author in general praises the methods that are practised in our own institutions, and speaks of them as being adaptations of general hospital methods to asylum life.

4. *Case Taking.*—A short note on how to keep case books.

5. *Treatment of Phthisis by Urea.*—This is a short paper on the action of urea in the treatment of tuberculosis, in addition to some remarks about infection and disinfection in asylums. The physiological chemistry quoted in the paper is very fragmentary and belongs to an earlier generation. As to the exact value of urea in tuberculosis the latest researches do not bear out Harper's extravagant claims.

6. *Alkalinity of the Blood in Mental Disease.*—R. Pugh pursues his method for determination of the alkalinity of the blood as already spoken of in our abstract of his article on alkalinity of the blood in epilepsy in Brain already presented, q. v. He summarizes his work on epilepsy in the present paper and discusses the blood conditions in general paresis, mania and in melancholia. His conclusions are as follows: (1) The alkalinity of the blood is physiological in chronic mania, melancholia and dementia. (2) It is lowered in cases of mania, during the period of excitement. (3) It undergoes marked variations in epilepsy, e. g.: a. It is below normal during the inter-paroxysmal period; b. it undergoes a sudden and pronounced fall immediately prior to the onset of the fit; c. it undergoes a further diminution after the fit is over. This after-diminution depends upon the length of time, the severity of the muscular spasms, and the degree of the alkalinity in the inter-paroxysmal period; d. there is a gradual return of the blood to its normal alkalinity, which takes place in five to six hours; e. there is a relationship between the degree of the alkalinity and the onset of fits, e. g., the higher the alkalinity the less liable is the patient to have a fit; f. it is impossible to elevate and maintain the alkalinity within physiological limits for any appreciable length of time by the administration of drugs. (4) It undergoes a diminution in dementia paralytica. This diminution is constant and well marked, and is probably due to the products of degeneration in the circulation. The variations in the diminution met with depend upon the type, progress and duration of the disease.

7. *Abnormalities of the Palate.*—The author first gives a summary of the various points of view of others, and the relationship between types of palate and mental qualities and describes twelve different kinds of palates and comes to the amazing inference: The palate of insane heredity is essentially a palate which is shallow or, at any rate, of the average depth in front, whatever its other characteristics may be. His general conclusions are summed up as follows: (1) Abnormalities of the palate are common in the insane; (2) these abnormalities may be roughly classified into two large groups, of which the former contains the palate of the hereditary psychopath and the latter the palate of the general degenerate; (3) the former palate is variable in its general type, but as a whole is shallow, or, at any rate, of the average depth in front; (4) the latter palate is also variable in its general type, but is in the main characterized by an increased depth at the level of first bicuspids.

The general criticism that may be offered is that the author makes generalizations from the few cases studied rather than from a general survey of the whole field.

8. *Insanity from Hasheesh.*—The author's experience in Egypt as di-

rector of the Egyptian Hospital for the Insane at Cairo puts him in a position to speak authoritatively on this interesting topic. Large quantities of cannabis are used by the inhabitants of the Egyptian towns, where the drug is mostly consumed by smoking in the gozeh and in cigarettes. Hasheesh users usually degenerate morally, and for this reason, if for no other, the habit is disapproved of in Egypt. Insanity from hasheesh belongs to the toxic group and in many regards is similar to that caused by opium, alcohol, cocaine, etc. The author compares the insanity from hasheesh along lines known for alcoholic intoxication. Thus he describes (1) Temporary intoxication, in which the smoker becomes dull and drowsy, feels pleasantly exalted and is at peace with the world. This is the common state to be observed among habitués of hasheesh cafes. There is very frequently a staggering gait, and if the hasheesh smoker is annoyed or interfered with he is liable to become excited, irritated and loses control. The author contrasts hasheesh, opium and alcohol by saying that the mental pose of the hasheesh smoker is more subjective than alcohol and less so than that of the opium user. The alcoholic is the most objective and demonstrative of the three. (2) Delirium from hasheesh, which is usually accompanied by hallucinations of sight, hearing, taste and smell. There is great exaltation, much restlessness and sleeplessness with motor phenomena of staggering, although there is no tremor or ataxia. Physical excitation and gastro-intestinal disorders do not occur. (3) Mania varies in degree of acuteness from a mild, short attack of excitement to a long, furious mania, ending in death. (4) Chronic mania may result. (5) Chronic dementia usually is a final stage of the preceding forms. (6) Cannabinomania is employed by the author to describe the condition of many hasheesh users between the attacks of the other forms. The user is usually a good-for-nothing, lazy fellow, who lives by begging and stealing, and pesters relatives for money to buy hasheesh.

The author gives some statistics bearing on the amount used, and a number of interesting and important legal suggestions. He believes that hasheesh is a much more dangerous drug in Egypt than India.

(Vol. 49, 1903, No. 2, April.)

1. Bacteriological and Clinical Observations on the Blood of Cases Suffering from Acute Continuous Mania. L. C. Bruce.
2. The Case of an Unrecognized Degenerate Punished by the Law. E. Goodall.
3. Nomenclature of Mental Diseases. A. R. Urkuhart.
4. The Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes. E. W. White.
5. Lunacy and the Law. T. O. Wood.
6. Note on a New Case Book Form. W. R. Dawson.
7. Notes on Hallucinations, II. Conolly Norman.

1. *The Blood of Acute Continuous Mania.*—L. C. Bruce of Murthly contributes a series of observations on the blood in acute mania. A few years ago he made some observations on the blood in insanity and was unable to find any micro-organisms and he devised a new method of making aseptic necrotic areas subcutaneously and then subsequently studying this area to ascertain the bacteria found therein. Acting on this theory he took a case of acute mania, an adult woman, and with antiseptic precautions injected into the soft tissues of the flank two c.c. of turpentine. An abscess formed and on the third day after the injection he aspirated some fluid and obtained a small culture of a small diplobacillus. Since this time he has made 24 similar observations and has observed the diplobacillus in seven instances. It has been found only in

cases of acute continuous mania, although other forms were studied. The details of the cultural characters are given. In a further portion of his paper he gives the results of the study of the leucocytes in fifty cases of acute insanity. Adopting 6,000 to 10,000 leucocytes per cubic mm. as his normal, he has studied leucocytosis in those who became chronic and those experimented on as previously reported and recovered, and in those in whom abscess was made in a chronic case which did not recover. In recent cases he finds that there is a high leucocytosis, thus bearing out the later contention that acute manias are always of infectious origin. This leucocytosis is mostly in the polymorphonuclear cells. In the second class of cases the leucocytosis tends to remain between 12 or 60 and 16,000, but the polymorphonuclear cells are rarely over 50 per cent. In his third group of cases leucocytosis was high, but gradually sank and recovery took place, mental improvement, the author declaring to be in proportion to the leucocytosis. His general conclusions are as follows: (1) If these blood observations are correct, they practically prove that acute continuous mania is an acute infective condition, and that when recovery takes place a condition of immunity is established. (2) They prove that, although the patient apparently recovers, the disease remains latent; hence the persistent leucocytosis, a point which might be of great importance in life-insurance examinations; (3) an examination of the blood is a valuable aid to prognosis, as for instance: If a case of mania has lasted for a month and remains maniacal and sleepless. The blood examination gives a leucocytosis of 14,000 per c.mm. of blood, with a percentage of 60 or below 60 of the multinucleated cells. The chances of an immediate or early recovery are poor. On the other hand, if the blood examination gives a leucocytosis of 18,000 or 20,000, with the multinucleated cells in a percentage of 70 or above 70, the prognosis is good. It is well when examining the condition of the blood to aid prognosis, to examine the blood on at least two consecutive days.

2. *Degenerate Punished by the Law.*—The case is that of a man, thirty-five years of age, who showed, on transferral to an asylum from a prison to which he had been condemned for twelve months' hard labor, symptoms of congenital deficiency with depressions, visual and aural hallucinations and agitation. The patient's ancestry was bad, and he had been in jail nine times previously. Anthropological measurements are also given in the paper. The author's conclusion is that the type of punishment meted, i. e., that of short-term imprisonments and discharge for this class of cases is useless and injurious to the individual and unjust to society. The prison is not a proper place for this type of criminal. He is mentally diseased and should be shut up for life in an asylum or reformatory.

3. *Nomenclature of Mental Disease.* The author gives some suggestions on the classification of the insane in which there is very little new and nothing striking or noteworthy.

4. *Care of Insane in Private Houses and Homes.*—The paper the author considers the natural outcome of Sir William Gowers' recent address on the care of the insane. It takes up the advantages of certified single care, and that they are privacy, domesticity, visits of friends, avoidance of the stigma of treatment in a lunatic asylum; whereas the disadvantages are the absence of skilled medical treatment, unskilled nursing, monotony, insufficient moral control, interference of friends, limited supervision, want of tact and business capacity on the part of the custodian. These are the advantages or disadvantages in the care and treatment of the duly certified person of unsound mind in private houses. As to the taking charge of a person of unsound mind not under service in a private house or nursing home the author's advantages and disadvantages are much the same, the want of official supervision being perhaps the most

serious of all the disadvantages. There are a number of useful suggestions in the paper, but they do not have very ready usage here.

5. *Lunacy and the Law.*—T. O. Wood discusses several features in the English Lunacy Law, which are of secondary interest to those practicing under different regulations.

6. *Note on a New Case Book Form.*—This is a short note on the method of keeping clinical histories and has no particular points one way or another.

7. *Hallucinations.*—The author here gives the histories of thirteen patients suffering from different forms of hallucinations. The paper is too detailed to admit of ready abstraction, but it contains many interesting suggestions, bearing more particularly upon the theory of psycho-motor verbal hallucinations, whereas he does not discuss any of this type. Those that are given show interesting connections with the forms described by Seglas.

8. *Clinical Notes and Cases.*—This number also contains Notes on some Pathological Cases, by M. J. Nolan, the swallowing of foreign bodies, such as nails, bristles, etc., by dements; a case of suppurative cholangitis; melancholia with universal acute eczema; senile melancholia associated with aneurisms of the aorta and rupture, and also a few Cases of Abdominal Surgery in the Insane, by Robert Jones; A Case of Hebephrenia, by W. R. Dawson; a Case of Thoracic Aneurism in a Secondary Dement, Simulating Mediastinal Growth, by Robt. Pugh; and Status Epilepticus Complicated with Scarlet Fever, by G. W. Greene. JELLIFFE.

BRAIN

(Vol. 25, 1902, Winter, No. 4.)

1. Some Observations on the Primary Degeneration of the Motor Tract. F. W. MOTT and A. F. TREDGOLD.
2. On the Pallio-tectal or Cortico-mesencephalic System of Fibers. CHARLES E. BEEVOR and SIR VICTOR HORSLEY.
3. A Case of Arrested Development of the Cerebellum and its Peduncles; with Spina-Bifida and Other Developmental Peculiarities in the Cord. W. B. WARRINGTON and K. MONSARRAT.
4. Toxic Degeneration of the Lower Neurones, Simulating Periphery Neuritis. STANLEY BARNES.
5. On Certain Blood Changes in Idiopathic Epilepsy. ROBERT PUGH.

1. *Primary Degeneration of the Motor Tract.* The authors describe the clinical course and microscopical appearances in four cases: two amyotrophic lateral sclerosis, one of progressive muscular atrophy and one of chronic rheumatoid arthritis with muscular atrophy. They say that degeneration of the motor tract is the anatomical lesion present in severe diseases having distinct clinical features. Thus it occurs in Friedreich's disease, in combined lateral and posterior sclerosis and in general paralysis, but in these other neurone systems are also affected. Degeneration may also result from local lesions as in the anterior poliomyelitis, polioencephalitis, embolus, etc. And lastly, cases exist in which not a degeneration but an arrest of the development of the motor tract occurs, apparently due to simple agenesis. It is with the primary degenerations, however, that occur in amyotrophic lateral sclerosis, progressive muscular atrophy, bulbar paralysis or primary spastic paraplegia that the paper deals.

Speaking of the nature of the morbid processes they believe that the changes in these cases are those of a sub-acute or chronic degeneration of a portion or the whole of the motor tract, that is of the upper segment alone, of the lower alone, or of both segments together. The cases they describe demonstrate that the change is a slow attack of individual neu-